

DOCUMENT RESUME**ED 098 447****95****CG 009 066**

TITLE How Health Professions Students Finance Their Education.
INSTITUTION Public Health Service (DHEW), Arlington, Va.
REPORT NO DHEW-HRA-74-13
PUB DATE Oct 73
NOTE 62p.

EDRS PRICE MF-\$0.75 HC-\$3.15 PLUS POSTAGE
DESCRIPTORS *Financial Needs; *Financial Support; *Health Occupations; *Income; National Surveys; Research Projects; Student Needs; *Surveys

ABSTRACT

This report was based on a survey to determine how students in the health professions of medicine osteopathy, dentistry, optometry, pharmacy, podiatry, and veterinary medicine financed their educations during the 1970-71 school year. The purpose of this nationwide survey was to provide information on patterns of student expenses and on the sources from which income was obtained, including any indebtedness incurred to finance their education. Marital status to be the single most important factor in determining both expenses and incomes of students in the health programs. Spouses tended to contribute more than twice as much income as any other source. The average annual expenses were highest--between \$6,231 and \$6,710--for students in dentistry, podiatry, and osteopathy, and lowest--\$3,739--for those in pharmacy. Approximately 35 percent of all students reported receiving federal or state scholarships or other nonrefundable grants. While the proportion of students obtaining loans ranged from 43 percent for pharmacy students to 70 percent for osteopathy students. Findings showed that the majority of students in all health profession schools reported some indebtedness as of June 1971. (Author/PC)

how health professions students finance their education

DHEW Publication No. (HRA) 74-13

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH RESOURCES ADMINISTRATION
Bureau of Health Resources Development
Division of Manpower Intelligence

October 1973

First Copy Available

DISCRIMINATION PROHIBITED

Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Therefore, the Bureau of Health Resources Development research, development, and demonstration projects, like every program or activity receiving financial assistance from the Department of Health, Education, and Welfare, must be operated in compliance with this law.

DISCRIMINATION ON BASIS OF SEX PROHIBITED

Section 799A of the PHS Act, as amended by the Comprehensive Health Manpower Training Act of 1973 (P.L. 92-157), prohibits the Secretary, DHFW, from making a contract, grant, loan guarantee, or interest subsidy payment under Title VII of the PHS Act to or for the benefit of any school of medicine, osteopathy, dentistry, veterinary medicine, optometry, pharmacy, podiatry, or public health or any training center for allied health personnel unless the application for such support contains assurances satisfactory to the Secretary that the school or training center will not discriminate on the basis of sex in the admission of individuals to its training programs.

BEST COPY AVAILABLE

CONTENTS □

| | <i>Page</i> | | <i>Page</i> |
|--|-------------|--|-------------|
| Introduction | vii | Appendix | 43 |
| Summary | 1 | A. Letter and Questionnaire to Health Professions Students | 45 |
| Questionnaire Returns | 3 | B. Letter to Medical Students | 50 |
| Findings for Health Professions Students | 5 | C. Letter to Osteopathic Students | 51 |
| 1 • Characteristics | 5 | D. Letter to Dental Students | 52 |
| 2 • Average Expenses | 10 | E. Letter to Pharmacy Students | 53 |
| 3 • Sources of Income | 20 | F. Letter to Optometry Students | 54 |
| 4 • Relationship between Income and Expenses | 37 | G. Letter to Podiatry Students | 55 |
| 5 • Indebtedness | 39 | H. Letter to Veterinary Medicine Students | 56 |

BEST COPY AVAILABLE

TABLES

| | Page |
|--|------|
| 1. Distribution of health professions students by family income compared to all families in the United States: 1970 | 5 |
| 2. Distribution of health professions students by father's occupation in comparison with all employed males in the United States: 1970 | 6 |
| 3. Average annual expenses of health professions students by school class and marital status: school year 1970-71 | 12 |
| 4. Percent distribution of health professions students by average total expenses: school year 1970-71 | 14 |
| 5. Number of health professions students and average annual expenses by school control and geographic division: school year 1970-71 | 15 |
| 6. Average annual expenses of health professions students by expense item and marital status: school year 1970-71 | 17 |
| 7. Average annual expenses of health professions students by school control and expense item: school year 1970-71 | 19 |
| 8. Proportion of health professions students' income from each source by discipline: school year 1970-71 | 21 |
| 9. Sources of health professions students' nonrefundable income by marital status: school year 1970-71 | 22 |

BEST COPY AVAILABLE

TABLES □ (continued)

| | |
|--|----|
| 10. Sources of health professions students' income by school control: school year 1970-71 | 24 |
| 11. Number of loans and average amounts borrowed from each source by health professions students: school year 1970-71 | 26 |
| 12. Distribution of health professions students with and without loans by family income: school year 1970-71 | 29 |
| 13. Proportion of health professions students reporting income and average amount of income from each source: school year 1970-71 | 30 |
| 14. Proportion of health professions students reporting loans, distribution of loan money, and aggregate amount of loans from each source: school year 1970-71 | 35 |
| 15. Relationship between income and expenses for health professions students by marital status: school year 1970-71 | 38 |
| 16. Proportion of students with debts in health professions schools and average amount of indebtedness by school class: June 1971 | 43 |

BEST COPY AVAILABLE

FIGURES

Page

| | |
|--|----|
| 1. Distribution of health professions students by fathers' educational level in comparison to all U.S. males, 25 years old and over, 1970 | 7 |
| 2. Distribution of health professions students by size of hometown in comparison with distribution of all persons in the United States, 1970 | 9 |
| 3. Average annual expenses of health professions students for selected expense items, school year 1970-71 | 10 |
| 4. Distribution of married students in each health profession, school year 1970-71 | 11 |
| 5. Proportion of health professions students who worked and median number of hours worked per week, school year 1970-71 | 33 |
| 6. Relationship between income and expenses for health professions students, school year 1970-71 | 37 |

BEST COPY AVAILABLE

INTRODUCTION □

This report is based on a survey sponsored by the Bureau of Health Manpower Education to determine how students in the health professions of medicine, osteopathy, dentistry, optometry, pharmacy, podiatry, and veterinary medicine financed their educations during the 1970-71 school year. The purpose of this nationwide survey was to provide information on patterns of expenses of students and on the sources from which financing was obtained, including any indebtedness incurred to finance the students' educations.

The survey was made by a private research organization, under contract, in cooperation with the various professional schools, the Association of American Medical Colleges, the American Osteopathic Association, the American Dental Association, the American Optometric Association, the American Association of Colleges of Pharmacy, the American Association of Colleges of Podiatric Medicine, and the American Veterinary Medical Association. Two similar reports of surveys covering only medical and osteopathic students were published in the past by the U. S. Public Health Service, the first in 1965¹ and the second in 1970.²

This report has been prepared under the direction of Anna R. Crocker of the Division of Manpower Intelligence with the assistance of Mary D. Overpeck as consultant.

W. A. Lybrand

William A. Lybrand, Ph.D.
Director
Division of Manpower Intelligence

BEST COPY AVAILABLE

Marital status seemed to be the single most important factor in determining both the expenses and incomes of students in the seven health professions which were surveyed during the 1970-71 school year. The health professions surveyed were: medicine, osteopathy, dentistry, optometry, pharmacy, podiatry, and veterinary medicine. Average annual expenses were highest between \$6,231 and \$6,710 for students of dentistry, podiatry, and osteopathy. They were lowest \$3,739 for pharmacy students.

Pharmacy schools had the smallest proportion of married students of any of the professions. Osteopathy, dentistry, and podiatry schools had the highest proportions of married students. Expenses rose with increasing family size. The cost of school expenses remained about the same whether the students were single or married and ranged between 28 and 38 percent of the average annual expenses of the students in the different professions. The amounts were highest for students of osteopathy and dentistry, and lowest for students of pharmacy and veterinary medicine.

Spouses tended to contribute more than twice as much income as any other source, the amounts ranging among the disciplines from \$3,286 to \$4,905, with between 36 and 44 percent of most of the students receiving a spouse's help. Only 21 percent of

the pharmacy students received help from a marriage partner. The amount of income from this source dropped with increasing family size. Childless married students acquired the smallest proportion of their incomes from loans in comparison to those with children or the single students, and they also reported income exceeding expenses far more often than did the other students.

The average annual income ranged from \$3,008 for pharmacy students, to \$5,115 for dental students. Two-thirds of the medical and osteopathic students, and four-fifths of the veterinary medical students reported income from their own earnings and savings. The average amount of student annual income from this source ranged between \$1,439 and \$1,767 for all the professions except podiatry. For podiatry students the average annual income was \$2,030. Twenty-eight to 54 percent of the students in different professions worked an average of from 14 to 20 hours a week. About one-half of the students received contributions from their parents with average contributions ranging from \$1,245 to \$2,159 among the disciplines. Pharmacy students had the lowest incomes, the highest proportion of students who worked while attending school, and the highest median number of hours worked. They also borrowed least often and obtained the lowest average loans.

SUMMARY □

BEST COPY AVAILABLE

Roughly 35 percent of all the students reported receiving Federal or State scholarships or other nonrefundable grants. Approximately one-fourth of the students in most professions received scholarships under the Federal health professions scholarship program. However, only 16 percent of the medical students and as much as 45 percent of the osteopathic students reported the Federal scholarship program as a source. Medical students received the highest average scholarship—\$964. Osteopathic students, the lowest—\$469. Scholarship averages for the other disciplines ranged between \$628 and \$763. Money from the Federal scholarship program provided about 3 percent of the students' incomes, more than any other grant or scholarship program.

The proportions of students obtaining loans ranged from 43 percent for pharmacy students to 70 percent for osteopathy students. For those students acquiring loans, the average amount borrowed ranged from \$1,179 to \$2,298, again the lowest amount for pharmacy students, and the highest for osteopathy students. About one-half of the students reporting loans received one through the Federal health profes-

sions loan program. The average amount of such loans [except for medical students] fell in the range of \$641 to \$885. The average loan to medical students was \$1,084. Funds from the Federal health professions loan program usually provided the largest proportion of students' income from a single source—about 5 percent. State government loans occasionally provided similar or larger amounts. The Federal loan program lent \$217 million, representing 26 percent of all money reported as loans. Altogether, scholarships and loans from the Federal health professions programs represented about 8 percent of the income of all health professions students.

A majority of students in all health professions schools reported some indebtedness as of June 1971. Among students in schools of pharmacy who were younger and less apt to be married than students in the other health professions schools, 56 percent of the students reported debts. In the other health professions schools, the proportion of students with debts ranged from 65 percent of the medical students to 79 percent of the osteopathic students.

BEST COPY AVAILABLE

In the middle of the 1970-71 school year more than 14,000 students from 126 schools were surveyed, with an overall response rate of about 88 percent. The entire student body of the 11 schools of optometry and 5 schools of podiatry were included. In the fields of osteopathic and veterinary medicine only half of the students in each school, [seven osteopathic and 18 veterinary medicine] were surveyed. For the remaining disciplines, schools were stratified by geographic division and type of control [public or private]. Sampling rates for these disciplines were as follows: for medicine, one of every four students in every third school, for dentistry, one of every four students in every other school, for pharmacy, one of every three students in every third school. Thirty-four medical schools, 26 dental schools, and 25 schools of pharmacy were included in the survey.

QUESTIONNAIRE ☐ RETURNS

Although the overall response rate of about 88 percent was fairly high, a number could be present due to characteristics of the respondents. Since the response rates were lower for the upper classroom, the overall study results could be biased to the extent that their expenses, incomes, and indebtedness were different [possibly greater] than those of the under classroom.

It should be noted that all data are based on estimates reported by students. Consequently, there may be little, if any, agreement with similar data from school or other sources.

BEST COPY AVAILABLE

1. CHARACTERISTICS

Whereas slightly less than half of the families in the United States had incomes of more than \$10,000 in 1970, relatively more health professions students came from families with higher incomes (Table 1). Students in optometry and pharmacy came from families with incomes very similar to those in the general population. Family income tended to be higher in the other professions. One-third of the

medical students and one-fourth of the dental students came from families with incomes of \$20,000 or more. The proportion of students from families with incomes of less than \$10,000 ranged from 27 percent of the medical students to 40 percent of the veterinary students. A vast majority of the black students in all professions came from families with incomes of less than \$10,000, with the proportions ranging from 60 percent of the black optometry students to almost 90 percent of the black students in pharmacy schools.

FINDINGS FOR □ HEALTH PROFESSIONS STUDENTS

BEST COPY AVAILABLE

Table 1
DISTRIBUTION OF HEALTH PROFESSION STUDENTS BY FAMILY INCOME
Compared to all families in the United States, 1970

| Family income | All families in U.S., 1970 ¹ | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
|---------------------------------------|--|----------|------------|-----------|-----------|----------|----------|------------------------|
| Total number of students ² | | 49,213 | 2,039 | 16,021 | 2,712 | 19,583 | 1,074 | 3,816 |
| Total percent ³ | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100 |
| Less than \$ 5,000 . . . | 19 | 7 | 12 | 7 | 19 | 17 | 11 | 12 |
| \$5,000 - \$ 9,999 . . . | 32 | 20 | 25 | 22 | 30 | 32 | 25 | 28 |
| \$10,000 - \$14,999 . . . | 27 | 25 | 28 | 30 | 27 | 29 | 28 | 30 |
| \$15,000 - \$19,999 . . . | 12 ⁴ | 15 | 13 | 6 | 14 | 13 | 15 | 14 |
| \$20,000 - \$24,999 . . . | 18 ⁴ | 11 | 7 | 11 | 4 | 5 | 10 | 8 |
| \$25,000 or more | 5 | 22 | 14 | 14 | 6 | 5 | 11 | 9 |

¹ Source: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports, Consumer Income*, Series P. 60, No. 80.

² Based on number of students who supplied data on family income.

³ Individual income percentages may not add to totals due to rounding.

⁴ Not reported separately.

Table 2
DISTRIBUTION OF HEALTH PROFESSIONS STUDENTS BY FATHER'S OCCUPATION
In comparison with all employed males in the United States, 1970

| Father's occupation | All U.S. employed males ¹ | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
|--|--|----------|------------|-----------|-----------|----------|----------|------------------------|
| Total percent, all occupations | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Physician | 13 | 15 | 11 | 3 | 5 | 1 | 5 | 1 |
| Dentist | 13 | 2 | 1 | 7 | 1 | 1 | 3 | 4 |
| Optometrist | 13 | 1 | 1 | 4 | 9 | 1 | 4 | 4 |
| Pharmacist | 13 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
| Podiatrist | 13 | 4 | 3 | 4 | 4 | 1 | 1 | 1 |
| Veterinarian | 13 | 4 | 4 | 4 | 4 | 4 | 1 | 4 |
| Other health worker | 13 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Other professional and technical worker | 13 | 28 | 18 | 23 | 18 | 15 | 11 | 21 |
| Owner, manager, proprietor | 15 | 20 | 24 | 23 | 24 | 16 | 29 | 15 |
| Clerical | 7 | 5 | 5 | 4 | 6 | 5 | 3 | 1 |
| Sales | 6 | 7 | 8 | 9 | 5 | 1 | 11 | 1 |
| Craftsman, skilled worker | 21 | 10 | 16 | 16 | 16 | 24 | 16 | 15 |
| Unskilled worker | 26 | 5 | 8 | 6 | 7 | 11 | 7 | 6 |
| Farmer, farm worker | 5 | 3 | 3 | 3 | 4 | 5 | 2 | 21 |
| Other occupations | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 4 |

¹ Source: U.S. Department of Labor, Bureau of Labor Statistics Special Labor Force Report No. 129, *Employment and Unemployment in 1970*. Based on all employed males, 20 years old and over, for the United States in 1970.

² Detail may not add to percent totals because of independent rounding.

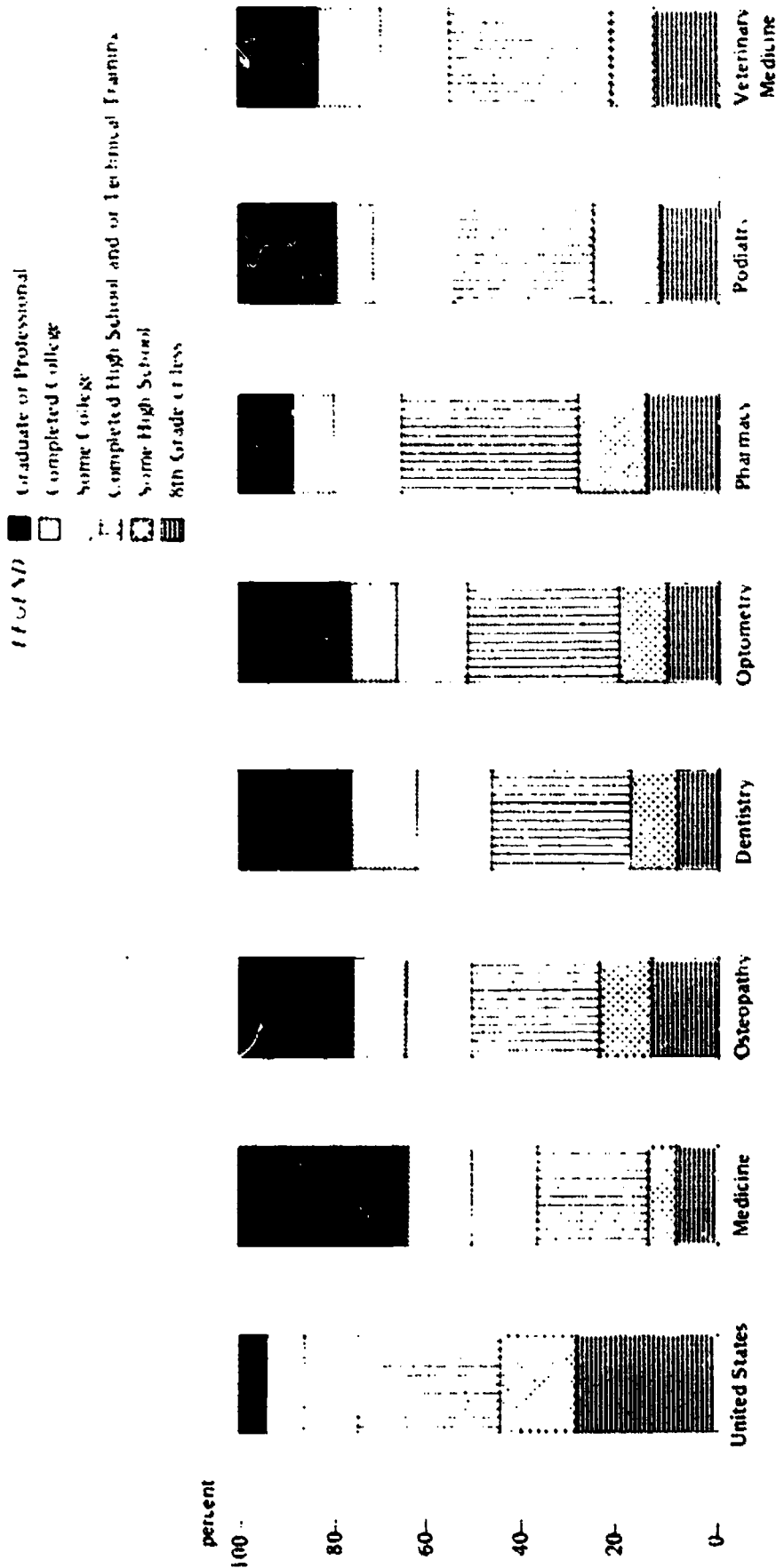
³ Not available separately for all U.S. employed males.

⁴ Less than 0.5%.

BEST COPY AVAILABLE

Figure 1
DISTRIBUTION OF HEALTH PROFESSIONS STUDENTS BY FATHER'S EDUCATIONAL LEVEL
in comparison to all U.S. males, 25 years and over, 1970

BEST COPY AVAILABLE



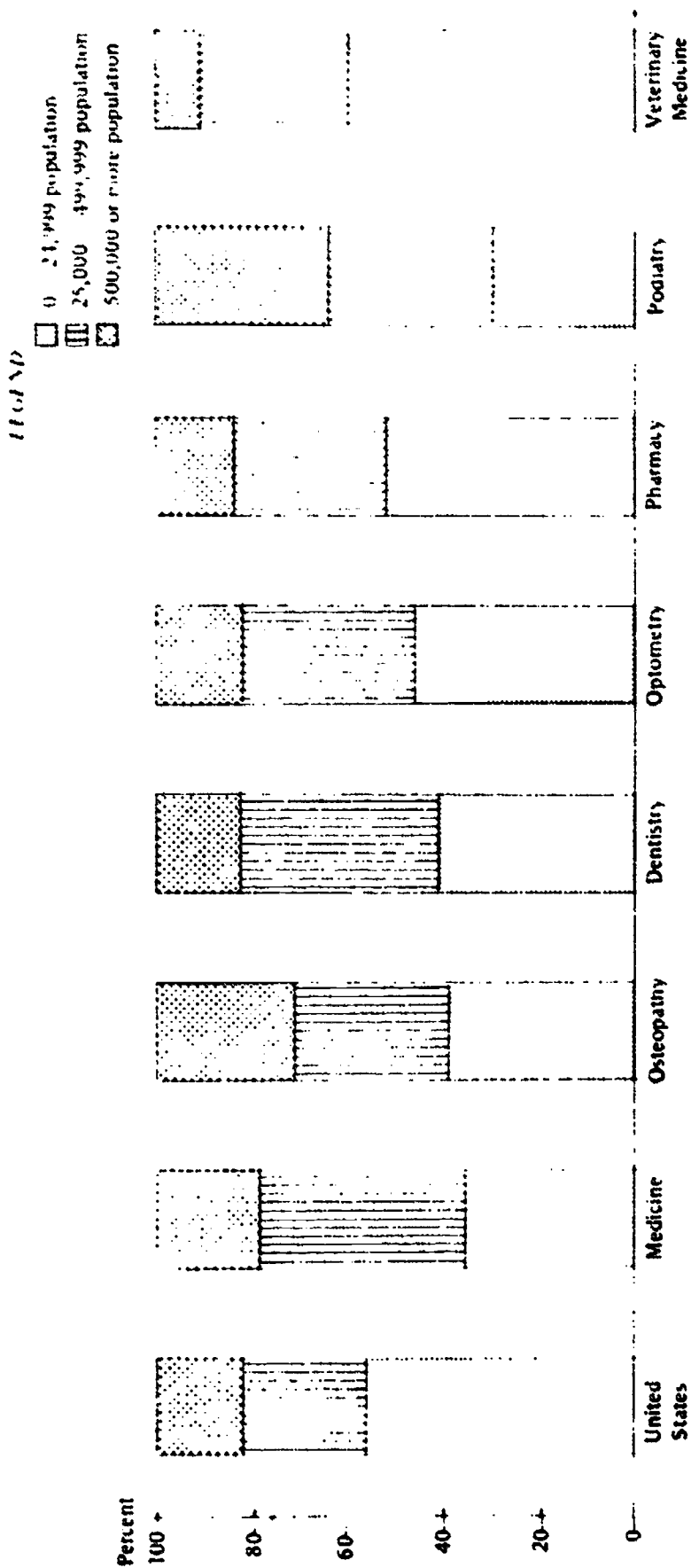
Only one percent of all men 20 years old or over in the United States were employed in the health professions in 1970 [Table 2]. Yet, the fathers of students surveyed were much more frequently in the health field, ranging from 8 percent of the fathers of veterinary students to 21 percent of medical. Almost half of the fathers of medical students were in either the health field or in professional and technical work. Approximately three fifths of the fathers of students in most of the other professions either were in the health, professional, or technical fields, or were owners, managers, or proprietors. Exceptions were fathers of students in pharmacy and veterinary medicine. A comparatively large proportion (24 percent) of the former had fathers who were crafts men or skilled workers. Twenty-one percent of the fathers of veterinary students were in farming or ranching, as might be expected.

Figure 1 shows that fathers of health professions students generally had higher educational levels than did all males in the United States who were 25 years old or over in 1970. While only one-fourth of this general population had completed college or had some graduate or professional education, approximately half of the fathers of the health professions students had acquired this level of education. The proportions ranged from 34 percent of pharmacy students' fathers to 62 percent of those of medical students.

BEST COPY AVAILABLE

Figure 2
DISTRIBUTION OF HEALTH PROFESSIONS STUDENTS BY SIZE OF HOME TOWN
In comparison with distribution of all persons in the United States: 1970

BEST COPY AVAILABLE

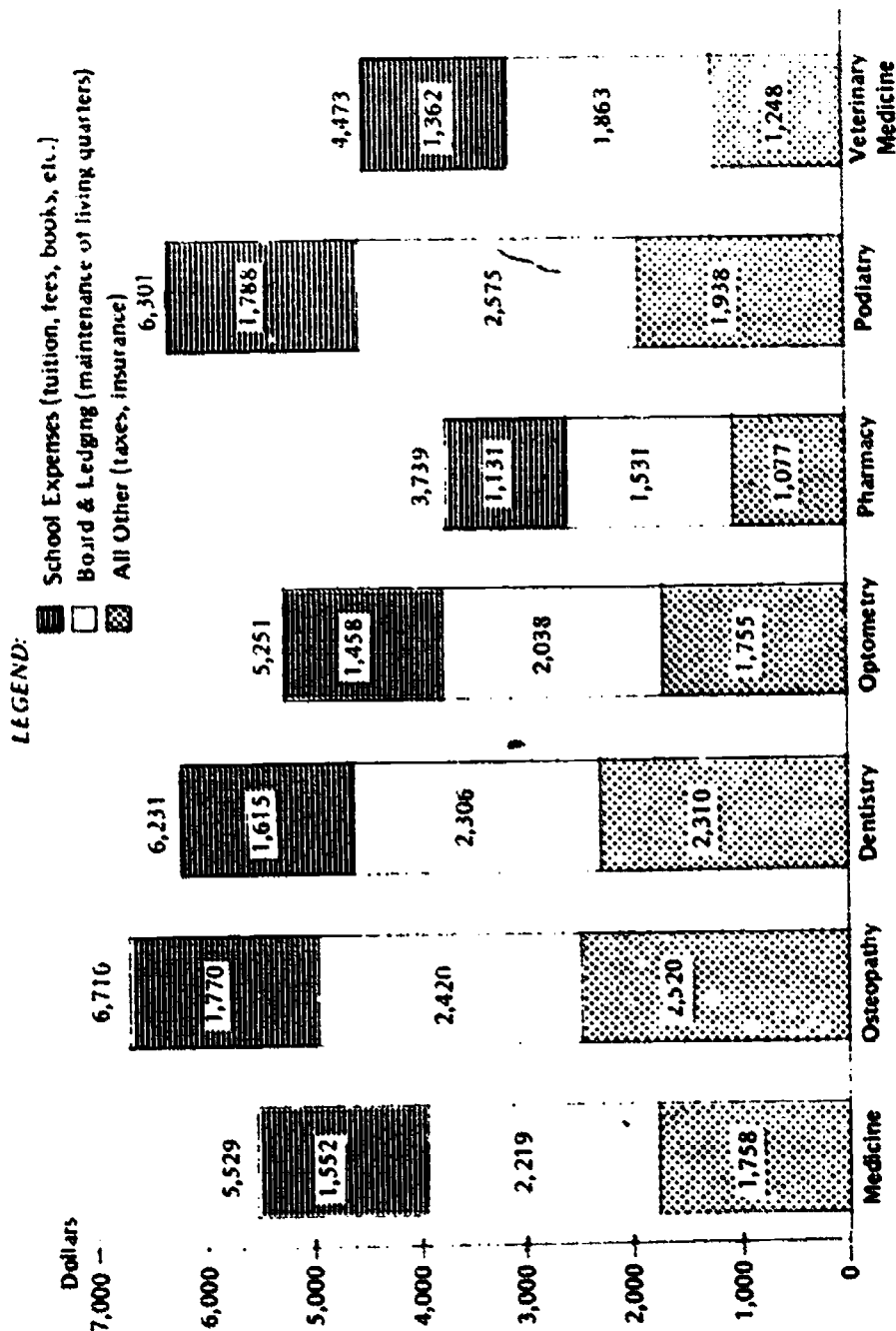


More than one-half of the United States population lived in towns of less than 25,000 persons in 1970 [Figure 2]. Three out of five of the students of veterinary medicine came from hometowns of this size, as did slightly more than half of the pharmacy students. Otherwise, the more urban areas provided comparatively more health professions students in relation to their populations. Students of osteopathy and podiatry came from cities of 500,000 persons or more far more often than did students in the other professions.

2. AVERAGE EXPENSES

Average annual expenses were highest, between \$6,231 and \$6,710, for students of dentistry, podiatry, and osteopathy. Students of medicine had expenses of \$5,529 on the average, and students of optometry averaged \$5,251. The average for students in veterinary medicine was \$4,473. Pharmacy students tend to be younger than students in the other health professions schools, which probably accounts in part for their lower expenses and incomes. [figure 3.] The figures include estimated expenses for school tuition and fees, books and supplies, equipment and uniforms, lodging and maintenance of living quarters, board, and an inclusive category of "all other expenses" for such items as personal maintenance, transportation, medical care, family expenses, recreation, taxes, insurance, and donations.

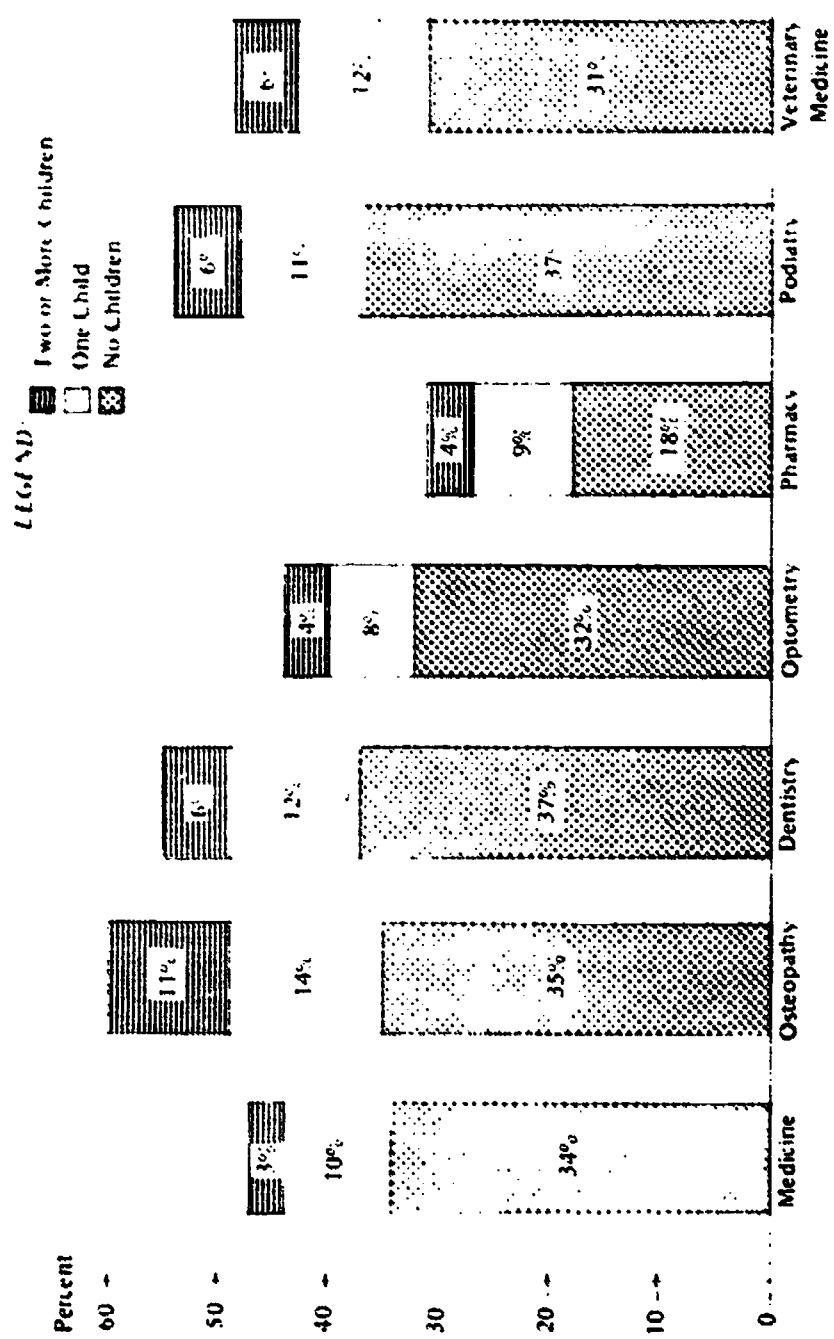
Figure 3
AVERAGE ANNUAL EXPENSES OF HEALTH PROFESSIONS STUDENTS
For selected expense items: School year 1970-71



BEST COPY AVAILABLE

Marital status and number of children seemed to be the most important factors in determining the expenses of the students. Figure 4 indicates that the relatively low average expenses for pharmacy students and high expenses of osteopathy students can be related partly to the difference in proportion of married students in those two groups compared to the others. Also, marital status may be one of the main reasons for generally increasing expenses with each advancing class year. In the freshman year, the proportion of married students ranged from one-fourth of the pharmacy students to one-half of the osteopathy students. By the senior year the proportion of married students ranged from one-third for pharmacy students to three-fourths for osteopathy students.

Figure 4
DISTRIBUTION OF MARRIED STUDENTS IN EACH HEALTH PROFESSION
School year 1970-71



BEST COPY AVAILABLE

Table 3
AVERAGE ANNUAL EXPENSES OF HEALTH PROFESSIONS STUDENTS
By school class and marital status: School year 1970-71

| School class and marital status | Average annual expenses | | | | | | |
|---|-------------------------|------------|-----------|-----------|----------|----------|---------------------|
| | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
| Total number of students | 40,280 | 2,151 | 16,599 | 2,823 | 20,577 | 1,136 | 4,998 |
| Average expenses, all classes | \$5,529 | \$6,710 | \$6,231 | \$5,251 | \$3,749 | \$6,302 | \$4,473 |
| Single | 4,295 | 4,878 | 4,595 | 3,931 | 2,768 | 4,519 | 3,160 |
| Married, no children | 6,930 | 7,799 | 7,532 | 6,875 | 4,981 | 7,865 | 5,643 |
| Married, one child | 6,573 | 7,850 | 7,669 | 6,926 | 6,003 | 7,485 | 5,927 |
| Married, two or more children | 7,774 | 8,519 | 8,107 | 7,548 | 8,066 | 8,248 | 6,710 |
| Freshman | \$4,897 | \$6,180 | \$6,055 | \$4,668 | \$3,641 | \$5,525 | \$4,122 |
| Single | 4,059 | 4,656 | 4,833 | 3,787 | 2,573 | 4,080 | 3,052 |
| Married, no children | 6,550 | 7,499 | 7,823 | 6,510 | 4,517 | 7,411 | 5,639 |
| Married, one child | 5,867 | 6,999 | 8,444 | 6,518 | 6,425 | 7,375 | 5,564 |
| Married, two or more children | 7,847 | 9,430 | 8,451 | 7,178 | 8,227 | 7,265 | 7,376 |
| Sophomore | \$5,262 | \$6,666 | \$6,321 | \$5,171 | \$3,545 | \$6,940 | \$4,290 |
| Single | 4,166 | 4,690 | 4,604 | 3,883 | 2,465 | 5,449 | 3,071 |
| Married, no children | 6,665 | 8,109 | 7,829 | 7,099 | 4,940 | 7,956 | 5,884 |
| Married, one child | 7,123 | 7,555 | 7,761 | 6,825 | 5,887 | 8,260 | 5,623 |
| Married, two or more children | 8,362 | 8,413 | 8,409 | 7,569 | 8,382 | 8,430 | 7,190 |
| Junior | \$5,879 | \$6,931 | \$6,351 | \$5,669 | \$3,610 | \$6,331 | \$4,666 |
| Single | 4,612 | 5,136 | 4,401 | 4,044 | 2,995 | 4,454 | 3,330 |
| Married, no children | 7,015 | 7,601 | 7,606 | 7,093 | 4,326 | 6,951 | 5,536 |
| Married, one child | 6,782 | 8,810 | 7,270 | 6,907 | 5,001 | 7,153 | 6,354 |
| Married, two or more children | 9,205 | 8,888 | 8,443 | 8,186 | 7,357 | 9,010 | 6,301 |

See footnotes at end of table.

BEST COPY AVAILABLE

Table 3 (Continued)
AVERAGE ANNUAL EXPENSES OF HEALTH PROFESSIONS STUDENTS
By school class and marital status: School year 1970-71

| School class and marital status | Average annual expenses | | | | | |
|--|-------------------------|------------|-----------|-----------|----------|----------|
| | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry |
| Total number of students | 40,280 | 2,151 | 16,599 | 2,823 | 20,577 | 1,136 |
| Senior, fifth & sixth years ¹ | \$6,224 | \$7,330 | \$6,224 | \$5,764 | \$4,386 | \$6,681 |
| Single | 4,630 | 5,394 | 4,274 | 4,230 | 3,275 | 4,379 |
| Married, no children | 7,288 | 7,944 | 6,957 | 6,754 | 6,660 | 8,105 |
| Married, one child | 6,704 | 7,895 | 7,482 | 7,314 | 7,036 | 7,027 |
| Married, two or more children | 6,608 | 7,948 | 7,517 | 7,091 | 6,720 | 8,595 |

¹ Some schools of pharmacy and medicine either require or offer fifth and sixth years. Students in these classes have been included as seniors.

The expenses of childless married students; and those with only one child were frequently very similar within a profession and school class. They ranged from \$4,326 for childless married pharmacy students to \$8,810 for osteopathy students with one child [Table 3]. Expenses of single students ranged from \$2,465 for sophomores in pharmacy schools to \$5,449 for sophomores in podiatry schools. Expenses

for married students with more than one child ranged from \$6,254 for seniors in veterinary medicine to \$9,430 for freshmen in osteopathy. With a few exceptions the expenses tended to rise as the students married and had children. For single students expenses rose with each year of class. Among the professions, variation by class was inconsistent for the married students with or without children.

BEST COPY AVAILABLE

Table 4
PERCENT DISTRIBUTION OF HEALTH PROFESSIONS STUDENTS BY AVERAGE TOTAL EXPENSES
School year 1970-71

| Average total expenses | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary | |
|------------------------|----------|----------------|-----------|-----------|----------|----------|------------|----------|
| | 100% | 100% | 100% | 100% | 100% | 100% | Medicine | Podiatry |
| Total | | | | | | | 100 | 100 |
| Less than \$2,000 | 3 | 0 ¹ | 2 | 3 | 21 | 2 | 3 | 3 |
| \$2,000 | 8 | 1 | 5 | 10 | 26 | 6 | 6 | 6 |
| \$3,000 | 17 | 7 | 12 | 21 | 22 | 14 | 22 | 22 |
| \$4,000 | 20 | 19 | 17 | 20 | 12 | 15 | 15 | 15 |
| \$5,000 | 19 | 17 | 15 | 15 | 6 | 13 | 13 | 13 |
| \$6,000 | 12 | 15 | 14 | 11 | 4 | 13 | 11 | 11 |
| \$7,000 | 9 | 16 | 14 | 9 | 3 | 13 | 6 | 6 |
| \$8,000 | 5 | 11 | 8 | 5 | 1 | 7 | 4 | 4 |
| \$9,000 | 3 | 6 | 6 | 3 | 1 | 6 | 1 | 1 |
| \$10,000 or more | 4 | 8 | 7 | 3 | 4 | 9 | 2 | 2 |

¹ Less than 0.5 percent.

Although there was a wide range in the average expenses of students across disciplines, most of the students in a specific discipline reported average expenses that were within a general range of \$2,000 to \$4,000 from each other. Less than 20 percent of the students in all disciplines except pharmacy and veterinary medicine reported average expenses under \$2,000 or over \$8,999. Twenty-four percent of the students in schools of veterinary medicine and 21

percent of the pharmacy students reported average expenses of less than \$2,000 [Table 4].

With a few exceptions the average annual expenses were higher in the New England, Midwestern, and Atlantic areas and lower in the South and the West [Table 5]. Expenses frequently varied as much as \$2,000 within a profession.

BEST COPY AVAILABLE

Table 5
NUMBER OF HEALTH PROFESSIONS STUDENTS AND AVERAGE ANNUAL EXPENSES
By school control and geographic division: school year 1970-71

| School control and geographic division | Average annual expenses | | | | | | |
|--|-------------------------|------------|-----------|-----------|----------|----------|------------------------|
| | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
| Total number of students | 40,280 | 2,151 | 16,554 | 2,827 | 20,577 | 1,136 | 3,998 |
| Average expenses, all schools | \$5,529 | \$6,710 | \$6,241 | \$5,261 | \$5,739 | \$6,101 | \$3,479 |
| U.S. possessions | | | | | 2,967 | | |
| New England | 6,541 | | 7,758 | 5,670 | 4,019 | | |
| Middle Atlantic | 5,583 | 6,281 | 6,210 | 6,005 | 5,285 | 6,395 | 5,508 |
| South Atlantic | 5,905 | | 6,355 | | 3,004 | | 3,246 |
| East South Central | 5,194 | | 6,049 | 5,547 | 3,154 | | 3,375 |
| West South Central | 5,233 | 7,876 | 5,238 | 4,987 | 3,171 | | 3,918 |
| East North Central | 5,702 | 6,797 | 6,042 | 4,926 | 4,231 | 5,928 | 3,474 |
| West North Central | 5,180 | 6,845 | 6,216 | | 3,176 | | 3,265 |
| Mountain | 4,543 | | | | 2,846 | | 3,643 |
| Pacific | 4,913 | | 5,806 | 4,968 | 5,806 | 7,130 | 3,479 |
| Number of students, public schools | 24,387 | 1 | 9,003 | 877 | 13,046 | 2 | 3,580 |
| Average expenses, public schools | \$5,064 | 1 | \$5,621 | \$4,447 | \$3,240 | | \$3,469 |
| U.S. possessions | | | | | 2,967 | | |
| New England | 5,811 | | | | 3,087 | | |
| Middle Atlantic | 5,003 | | | | 2,804 | | 4,577 |
| South Atlantic | 5,501 | | 5,841 | | 3,004 | | 3,246 |
| East South Central | 4,795 | | 5,952 | 4,341 | 3,154 | | 3,524 |
| West South Central | 5,233 | | 5,250 | 4,987 | 3,212 | | 3,918 |
| East North Central | 5,262 | | 5,238 | 4,442 | 4,155 | | 3,474 |
| West North Central | 4,882 | | 6,041 | | 2,809 | | 3,285 |
| Mountain | 4,543 | | | | 2,536 | | 3,643 |
| Pacific | 4,228 | | 5,299 | 3,801 | 2,778 | | 3,479 |

See footnotes at end of table.

Table 5 (Continued)
NUMBER OF HEALTH PROFESSIONS STUDENTS AND AVERAGE ANNUAL EXPENSES
By school control and geographic division School year 1970-71

| School control and geographic division | Average annual expenses | | | | | | |
|---|-------------------------|------------|----------|--------------|----------|----------|------------------------|
| | Medicine | Osteopaths | Dentists | Optometrists | Pharmacy | Podiatry | Veterinary Medicine |
| Number of students, private schools | 15,893 | 2,130 | 7,596 | 1,936 | 6,531 | 1,136 | 438 |
| Average expenses, private schools | \$6,242 | \$6,699 | \$6,955 | \$5,613 | \$4,853 | \$6,360 | \$5,609 |
| U.S. possessions | | | | | | | |
| New England | 6,613 | | 7,738 | 5,670 | 4,857 | | |
| Middle Atlantic | 6,012 | 6,281 | 6,462 | 6,003 | 4,923 | 6,396 | 6,257 |
| South Atlantic | 6,699 | | 6,516 | | | | |
| East South Central | 5,534 | | 6,680 | 5,631 | 2,930 | | 3,856 |
| West South Central | | | | | | | |
| East North Central | 6,488 | 6,797 | 6,523 | 5,422 | 4,381 | 5,925 | |
| West North Central | 5,904 | 6,845 | 6,885 | | | | |
| Mountain | | | | | | | |
| Pacific | 6,333 | | 9,235 | 5,406 | 8,039 | 7,130 | |

1 Eliminated for confidentiality purposes, since there was only one such school.
2 There are no public schools of podiatry.

School expenses accounted for between 28 and 38 percent of the average annual expenses of students in the health professions. The average amounts spent were highest for students of osteopathy and dentistry and lowest for students of pharmacy and veterinary medicine [Table 6]. "All other expenses" represented

another high outlay of funds. Lodging and maintenance of living quarters accounted for 20 to 24 percent of the total average expenses, and board was 16 to 19 percent of the average amount spent by students in all professions.

Table 6
AVERAGE ANNUAL EXPENSES OF HEALTH PROFESSIONS STUDENTS BY EXPENSE ITEM AND MARITAL STATUS
School year 1970-71

| Expense item and marital status | Average annual expenses | | | | | |
|--|-------------------------|------------|-----------|-----------|----------|-----------|
| | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Radiology |
| Average expenses, all students | \$5,529 | \$6,710 | \$6,231 | \$5,251 | \$3,739 | \$6,301 |
| Single | 4,295 | 4,878 | 4,595 | 4,931 | 2,768 | 4,519 |
| Married, no children | 6,930 | 7,799 | 7,532 | 6,875 | 4,981 | 7,865 |
| Married, one child | 6,571 | 7,850 | 7,669 | 6,926 | 6,003 | 7,385 |
| Married, two or more children | 7,774 | 8,519 | 8,107 | 7,538 | 8,066 | 8,248 |
| School expenses | 1,758 | 2,520 | 2,310 | 1,755 | 1,077 | 1,918 |
| Single | 1,822 | 2,425 | 2,339 | 1,711 | 1,065 | 1,851 |
| Married, no children | 1,744 | 2,512 | 2,293 | 1,861 | 1,089 | 2,025 |
| Married, one child | 1,485 | 2,520 | 2,422 | 1,697 | 1,146 | 2,092 |
| Married, two or more children | 1,706 | 2,536 | 2,172 | 1,778 | 1,390 | 1,963 |
| Lodging and maintenance of living quarters | 1,263 | 1,352 | 1,323 | 1,178 | 812 | 1,512 |
| Single | 857 | 836 | 764 | 779 | 504 | 963 |
| Married, no children | 1,715 | 1,668 | 1,760 | 1,665 | 1,222 | 1,967 |
| Married, one child | 1,597 | 1,721 | 1,733 | 1,614 | 1,519 | 1,903 |
| Married, two or more children | 1,915 | 1,806 | 1,798 | 1,821 | 1,525 | 2,125 |
| Board | 956 | 1,068 | 983 | 860 | 719 | 1,043 |
| Single | 725 | 635 | 640 | 586 | 469 | 691 |
| Married, no children | 1,177 | 1,189 | 1,198 | 1,147 | 901 | 1,295 |
| Married, one child | 1,171 | 1,302 | 1,248 | 1,232 | 1,028 | 1,284 |
| Married, two or more children | 1,615 | 1,672 | 1,626 | 1,463 | 2,423 | 1,561 |
| Veterinary Medicine | | | | | | |
| Average expenses, all students | \$1,373 | | | | | |
| Single | 1,160 | | | | | |
| Married, no children | 1,643 | | | | | |
| Married, one child | 1,927 | | | | | |
| Married, two or more children | 1,710 | | | | | |

See footnotes at end of table.

Table 6 (Continued)

AVERAGE ANNUAL EXPENSES OF HEALTH PROFESSIONS STUDENTS BY EXPENSE ITEM AND MARITAL STATUS

School year 1976-77

| Expense item and marital status | Average annual expenses | | | | | | |
|---------------------------------|-------------------------|------------|-----------|-----------|----------|----------|------------|
| | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary |
| Average expenses, all students | \$5,529 | \$6,110 | \$6,241 | \$5,282 | \$6,769 | \$6,431 | \$4,417 |
| All other expenses | 1,552 | 1,720 | 1,915 | 1,488 | 1,141 | 1,388 | 1,067 |
| Single | 892 | 861 | 882 | 888 | 740 | 973 | 718 |
| Married, no children | 2,294 | 2,410 | 2,261 | 2,202 | 1,768 | 2,588 | 1,988 |
| Married, one child | 2,419 | 2,407 | 2,266 | 2,374 | 2,009 | 2,276 | 2,008 |
| Married, two or more children | 2,537 | 2,495 | 2,811 | 2,480 | 2,220 | 2,277 | 2,142 |

Expense items may not add to total average expenses because of independent rounding.

Annual expenses were about \$1,200 higher for students in private schools than in public schools [Table 7]. Usually, most of this difference was accounted for in the area of school expenses, although both board and lodging were frequently slightly more expensive for students in private schools than for those in public. For private school students school expenses ranged from 31 to 43 percent of the annual average expenses so that the other areas of expense comprised relatively lower proportions of these students' total monetary requirements.

The costs of board and lodging for married students were about double those of the single students, varying somewhat by profession and the number of children. The costs of "all other expenses" for those with two or more children were approximately three times what they were for single students. No large or consistent variation among the disciplines existed in the average annual expenses of students from families with different income levels.

Table 7
AVERAGE ANNUAL EXPENSES OF HEALTH PROFESSIONS STUDENTS BY SCHOOL CONTROL AND EXPENSE ITEM
School year 1970-71

| School control and expense item | Average annual expenses | | | | | | |
|---|-------------------------|------------|-----------|-----------|----------|----------|------------------------|
| | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
| All students, average expenses ¹ | \$5,529 | \$6,710 | \$6,210 | \$5,250 | \$5,739 | \$6,301 | \$5,323 |
| School expenses | 1,758 | 2,520 | 2,310 | 1,755 | 1,922 | 1,938 | 1,238 |
| Lodging and maintenance of living quarters | 1,263 | 1,352 | 1,323 | 1,118 | 812 | 1,542 | 1,043 |
| Board | 956 | 1,068 | 984 | 860 | 719 | 1,033 | 819 |
| All other expenses | 1,552 | 1,770 | 1,615 | 1,358 | 1,331 | 1,288 | 1,462 |
| Public schools, average expenses | 5,064 | 2 | 5,621 | 4,447 | 3,230 | 3 | 3,469 |
| School expenses | 1,319 | 2 | 1,719 | 1,123 | 738 | | 51 |
| Lodging and maintenance of living quarters | 1,237 | 2 | 1,277 | 1,139 | 766 | | 1,136 |
| Board | 932 | 2 | 967 | 816 | 655 | | 815 |
| All other expenses | 1,566 | 2 | 1,658 | 1,358 | 1,060 | | 1,467 |
| Private schools, average expenses | 6,242 | 6,699 | 6,955 | 5,614 | 4,844 | 6,301 | 5,698 |
| School expenses | 2,430 | 2,520 | 3,099 | 2,040 | 1,782 | 1,938 | 1,301 |
| Lodging and maintenance of living quarters | 1,289 | 1,348 | 1,380 | 1,191 | 912 | 1,532 | 1,131 |
| Board | 991 | 1,064 | 1,003 | 880 | 867 | 1,044 | 877 |
| All other expenses | 1,532 | 1,767 | 1,562 | 1,503 | 1,274 | 1,788 | 1,299 |

¹ Expense items may not add to total average expenses because of rounding.

² Eliminated for confidentiality purposes since there was only one public school.

³ There are no public schools of podiatry.

3. SOURCES OF INCOME

Most students in the health professions used a variety of sources to finance their education. Table 8 shows that between 74 and 85 percent of the income reported by students came from nonrefundable sources. Students of osteopathy obtained the highest proportion of their income from loans, 26 percent, while pharmacy students borrowed the lowest proportion, 15 percent. More than two-thirds of all students' incomes came from three sources: their own earnings and savings, spouses' contributions, and parents' contributions. Spouses' contributions provided the largest proportion of any source—30 to 34 percent—except for the pharmacy students, relatively few of whom were married. Pharmacy students received only 20 percent of their income from spouses' contributions. The percent of income from a student's earnings and savings was generally larger than that from his parent's contributions although the proportions from these two sources were very similar for students of medicine and osteopathy. Money from the Federal health professions scholarship program provided about 3 percent of students' incomes, more than any other grant or scholarship program. Funds from the Federal health professions loan program usually provided the largest proportion from a single loan source—about 5 percent—although State government loans occasionally provided similar or larger amounts. Altogether, scholar-

ships and loans from the Federal health professions programs represented about 8 percent of the income of health professions students.

In all professions, childless married students obtained a larger proportion of their income from nonrefundable sources than did those with children or the single students [Table 9]. About one-half of the incomes of childless married students came from the spouses' contributions. The proportion from this source decreased as the number of children increased. Single students and married students with two or more children, in all the professions, obtained larger proportions of their incomes from their own earnings and savings, ranging from 23 to 40 percent, than did the other students. Single students received much more of their income from parents' contributions than did any of the married students.

BEST COPY AVAILABLE

Table 8
PROPORTION OF HEALTH PROFESSIONS STUDENTS' INCOME FROM EACH SOURCE BY DISCIPLINE:
School year 1970-71

| Source of income | Percent of students' income ¹ | | | | | | Veterinary Medicine |
|--|--|------------|-----------|-----------|----------|----------|------------------------|
| | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | |
| Total income | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Nonrefundable funds: | | | | | | | |
| Total | 81 | 74 | 79 | 83 | 85 | 81 | 82 |
| Own earnings and savings | 19 | 18 | 20 | 23 | 35 | 25 | 25 |
| Spouse's contribution | 30 | 30 | 34 | 31 | 20 | 32 | 12 |
| Parent's contribution | 20 | 18 | 17 | 20 | 17 | 16 | 14 |
| Federal health professions scholarship | 3 | 3 | 3 | 3 | 5 | 3 | 4 |
| National Institutes of Health supported research | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| Other Federal research and/or training grants | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| State government scholarship | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Other nonrefundable funds | 7 | 4 | 4 | 4 | 7 | 4 | 6 |
| Refundable funds (loans): | | | | | | | |
| Total | 19 | 26 | 21 | 17 | 15 | 19 | 18 |
| Federal health professions | 5 | 5 | 5 | 5 | 4 | 4 | 5 |
| Federal office of education guaranteed loans | 2 | 4 | 4 | 3 | 2 | 3 | 3 |
| National defense student loan | 1 | 1 | 1 | 1 | 2 | 2 | 1 |
| Own professional school loan | 2 | 1 | 1 | 2 | 2 | 2 | 2 |
| State government loan | 3 | 6 | 3 | 3 | 2 | 5 | 2 |
| Private bank loan | 2 | 3 | 3 | 2 | 3 | 2 | 2 |
| Other loans | 4 | 6 | 4 | 3 | 2 | 2 | 4 |

¹ Income sources may not add to percent totals because of rounding.

² Less than 0.5 percent.

Table 9
SOURCES OF HEALTH PROFESSIONS STUDENTS' NONREFUNDABLE INCOME BY MARITAL STATUS
School year 1970-71

| Source and marital status | Percent of students' income ¹ | | | | | | |
|---|--|------------|-----------|-----------|----------|----------|---------------------|
| | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
| All nonrefundable sources: | | | | | | | |
| Total percent | 87% | 74% | 79% | 83% | 85% | 81% | 82% |
| Single | 75 | 70 | 72 | 77 | 80 | 73 | 78 |
| Married, no children | 88 | 81 | 86 | 88 | 90 | 86 | 88 |
| Married, one child | 78 | 69 | 76 | 83 | 88 | 81 | 75 |
| Married, two or more children | 75 | 68 | 75 | 83 | 90 | 82 | 78 |
| Own earnings and savings | | | | | | | |
| Single | 19 | 18 | 20 | 23 | 35 | 25 | 25 |
| Married, no children | 24 | 23 | 24 | 29 | 40 | 40 | 34 |
| Married, one child | 13 | 13 | 15 | 17 | 27 | 19 | 18 |
| Married, two or more children | 21 | 19 | 23 | 26 | 35 | 41 | 22 |
| Spouse's contribution | 24 | 23 | 29 | 29 | 32 | 31 | 28 |
| Spouse's contribution | | | | | | | |
| Single | 30 | 30 | 34 | 31 | 20 | 32 | 32 |
| Married, no children | 55 | 53 | 58 | 55 | 46 | 52 | 56 |
| Married, one child | 30 | 30 | 34 | 37 | 42 | 29 | 32 |
| Married, two or more children | 19 | 21 | 22 | 31 | 24 | 29 | 30 |
| Parent's contribution | | | | | | | |
| Single | 20 | 18 | 17 | 20 | 17 | 16 | 14 |
| Married, no children | 36 | 38 | 38 | 38 | 26 | 35 | 29 |
| Married, one child | 11 | 10 | 8 | 9 | 8 | 9 | 6 |
| Married, two or more children | 11 | 10 | 9 | 10 | 7 | 10 | 8 |
| Spouse's contribution | 11 | 11 | 7 | 7 | 5 | 6 | 4 |

See footnotes at end of table.

BEST COPY AVAILABLE

Table 9 (Continued)
SOURCES OF HEALTH PROFESSIONS STUDENTS' NONREFUNDABLE INCOME BY MARITAL STATUS:
School year 1970-71

| Source and marital status | Percent of students' income ¹ | | | | | | |
|---|--|------------|-----------|-----------|----------|----------|---------------------|
| | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
| All nonrefundable sources: | | | | | | | |
| Total percent | 87% | 74% | 79% | 82% | 85% | 81% | 82% |
| Federal health professions scholarship | | | | | | | |
| Single | 3 | 3 | 3 | 3 | 5 | 3 | 4 |
| Married, no children | 4 | 3 | 4 | 5 | 6 | 4 | 5 |
| Married, one child | 2 | 2 | 2 | 2 | 4 | 2 | 2 |
| Married, two or more children | 4 | 4 | 3 | 4 | 3 | 4 | 6 |
| Other Federal and state grants and scholarships | | | | | | | |
| Single | 3 | 1 | 1 | 1 | 1 | 1 | 1 |
| Married, no children | 3 | 1 | 1 | 1 | 2 | 1 | 2 |
| Married, one child | 3 | 1 | 1 | 2 | 3 | 1 | 1 |
| Married, two or more children | 1 | 1 | 3 | 1 | 1 | 2 | 2 |
| Other nonrefundable funds | | | | | | | |
| Single | 7 | 4 | 4 | 4 | 7 | 4 | 6 |
| Married, no children | 8 | 4 | 4 | 4 | 6 | 3 | 6 |
| Married, one child | 5 | 2 | 2 | 4 | 5 | 3 | 5 |
| Married, two or more children | 9 | 4 | 5 | 5 | 9 | 6 | 6 |
| Total | 14 | 9 | 9 | 9 | 25 | 11 | 9 |

¹ Individual sources may not add to percent totals due to rounding.

² Less than 0.5 percent.

BEST COPY AVAILABLE

Table 10 shows that the control of the school also seemed to have a relationship to the source of students' incomes. Public school students generally obtained a larger proportion of income from spouses' contributions and their own earnings and savings than did private school students whereas parents of the private school student provided more income than did parents of the public school student. Control of school did not seem to be much of a factor in grants, scholarships, or loans, although a somewhat higher proportion of private school than public school students' incomes came from State government loans.

SOURCES OF HEALTH PROFESSIONS STUDENTS' INCOME BY SCHOOL CONTROL:
Table 10
School year 1970-71

| Source and control of school | Percent of students' income and school control | | | | | | | | | | | | | |
|--|--|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------|
| | Medicine | | Osteopathy | | Dentistry | | Optometry | | Pharmacy | | Podiatry | | Vet. Med. | |
| | Public | Private | Public | Private | Public | Private | Public | Private | Public | Private | Public | Private | Public | Private |
| Total income | 100% | 100% | — ¹ | 100% | 100% | 100% | 100% | 100% | 100% | 100% | — ² | 100% | 100% | 100% |
| Total nonrefundable funds | 80 | 83 | — ¹ | 74 | 82 | 77 | 84 | 82 | 87 | 80 | — ² | 81 | 83 | 76 |
| Own earnings and savings | 20 | 18 | — ¹ | 18 | 20 | 20 | 26 | 22 | 36 | 32 | — ² | 25 | 26 | 18 |
| Spouse's contribution | 33 | 25 | — ¹ | 30 | 39 | 29 | 31 | 31 | 24 | 10 | — ² | 32 | 33 | 27 |
| Parent's contribution | 15 | 27 | — ¹ | 18 | 14 | 20 | 16 | 22 | 15 | 21 | — ² | 16 | 13 | 18 |
| Federal health prof- fessions scholarship.. | 3 | 3 | — ¹ | 3 | 3 | 3 | 4 | 3 | 5 | 6 | — ² | 3 | 4 | 4 |
| Federal research or training grant | 2 | 1 | — ¹ | — ³ | — ³ | — ³ | — ² | — ³ | — ³ | — ³ | — ² | — ³ | — ³ | 1 |
| State government scholarship | 1 | 1 | — ¹ | 1 | 1 | 1 | 1 | 1 | 1 | 2 | — ² | 1 | 1 | 1 |
| Other nonrefund- able funds | 6 | 8 | — ¹ | 4 | 4 | 3 | 5 | 4 | 7 | 7 | — ² | 4 | 6 | 7 |

See footnotes at end of table.

¹ Eliminated for confidentiality purposes since there was only one public school.

Most students used only one loan source. However, a large number used a combination of two or three ([Table 11]. The Federal health professions loan program was the most frequently used source either alone or in combination with other sources; no other source was used as consistently among all the professions. The average amount borrowed from other sources was usually greater than the average amount borrowed from the Federal source. As the number of loan sources increased, the amount borrowed increased. Veterinary and pharmacy students borrowed the least amounts from most sources while students of medicine, osteopathy, and dentistry borrowed the highest amounts.

Table 11
NUMBER OF LOANS AND AVERAGE AMOUNTS BORROWED FROM EACH SOURCE BY HEALTH PROFESSIONS STUDENTS:
School year 1970-71

| Sources of loans | Number of loans and average amount borrowed | | | | | | |
|---|---|------------|-----------|-----------|----------|----------|---------------------|
| | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
| Number of loans: | | | | | | | |
| Single source: | | | | | | | |
| Federal health professions | 4,447 | 207 | 2,227 | 456 | 2,301 | 149 | 670 |
| Federal Office of Education, guaranteed loans | 1,519 | 80 | 981 | 150 | 724 | 67 | 278 |
| National defense student loan | 586 | 2 | 264 | 40 | 1,089 | 16 | 57 |
| Professional school | 2,157 | 18 | 246 | 18 | 148 | 5 | 37 |
| State government | 1,519 | 138 | 854 | 109 | 774 | 111 | 214 |
| Private bank | 1,335 | 37 | 640 | 102 | 903 | 30 | 171 |
| All others | 1,928 | 88 | 859 | 105 | 741 | 43 | 346 |
| Two sources: | | | | | | | |
| Federal health professions and others | 4,547 | 435 | 2,638 | 385 | 1,503 | 137 | 446 |
| All other combinations | 2,201 | 134 | 1,061 | 76 | 460 | 67 | 216 |
| Three sources: | | | | | | | |
| Federal health professions and others | 1,023 | 244 | 742 | 66 | 240 | 40 | 147 |
| All other combinations | 355 | 43 | 49 | 9 | 20 | 3 | 26 |
| Four sources: | | | | | | | |
| Federal health professions and others | 159 | 61 | 119 | 10 | 32 | 3 | 10 |
| All other combinations | 28 | 7 | 9 | - | - | - | 7 |
| Five sources: | | | | | | | |
| Federal health professions and others | 12 | 6 | - | - | - | - | 4 |
| All other combinations | - | 2 | - | - | - | - | - |

(Continued on next page.)

Table 11 (Continued)
NUMBER OF LOANS AND AVERAGE AMOUNTS BORROWED FROM EACH SOURCE BY HEALTH PROFESSIONS STUDENTS
School year 1970-71

| Sources of loans | Number of loans and average amount borrowed | | | | | | |
|---|---|------------|-----------|-----------|----------|----------|---------------------|
| | Medicine | Osteopathy | Dentistic | Optometry | Pharmacy | Podiatry | Veterinary medicine |
| Average amounts borrowed: | | | | | | | |
| Single sources: | | | | | | | |
| Federal health professions | \$1,127 | \$ 748 | \$ 880 | \$ 826 | \$ 719 | \$ 860 | \$ 670 |
| Federal Office of Education guaranteed loans | 1,435 | 1,513 | 1,468 | 1,278 | 1,133 | 1,603 | 278 |
| National defense student loan | 1,135 | 1,500 | 1,134 | 1,076 | 815 | 1,344 | 57 |
| Professional school | 1,509 | 748 | 820 | 502 | 660 | 790 | 705 |
| State government | 1,345 | 1,533 | 1,582 | 1,416 | 1,252 | 1,630 | 1,331 |
| Private bank | 1,505 | 2,105 | 1,464 | 1,507 | 998 | 1,676 | 1,306 |
| All others | 1,874 | 2,356 | 2,429 | 1,893 | 1,385 | 1,837 | 1,594 |
| Two sources: | | | | | | | |
| Federal health professions and others | 2,500 | 2,119 | 2,280 | 1,996 | 1,637 | 2,211 | 2,073 |
| All other combinations | 2,727 | 2,831 | 2,784 | 2,670 | 2,103 | 2,788 | 2,394 |
| Three sources: | | | | | | | |
| Federal health professions and others | 3,367 | 3,294 | 3,505 | 3,518 | 2,342 | 3,239 | 3,455 |
| All other combinations | 3,413 | 4,112 | 3,131 | 2,844 | 2,825 | 2,967 | 2,983 |
| Four sources: | | | | | | | |
| Federal health professions and others | 4,744 | 4,786 | 6,514 | 3,680 | 4,107 | 2,817 | 3,720 |
| All other combinations | 4,862 | 5,236 | 6,000 | | | | 5,607 |
| Five sources: | | | | | | | |
| Federal health professions and others | 6,330 | 5,933 | | | | | 6,875 |
| All other combinations | — | 8,200 | | | | | |

BEST COPY AVAILABLE

The distribution of loans among the students in a profession did not follow either the distribution of students from different income levels, or students with different marital statuses, or students in public or private schools. In all the health professions, a larger proportion of students from families with incomes less than \$15,000 had loans than did those with larger family incomes [Table 12]. Single and childless married couples obtained loans in proportion to their numbers in a profession, whereas married students with children showed a greater tendency to acquire loans. The distribution of students with loans followed no consistent trends by school control, except in medical schools, where public school students obtained loans less often than did private school students.

Table 13 shows that almost all of the students had some income from nonrefundable sources. The proportion obtaining loans among the professions ranged from 43 percent for pharmacy students to 70 percent for osteopathy students. The average amount of nonrefundable income ranged from \$3,008 for pharmacy students to \$5,115 for dental students. For those students acquiring loans, the average amount borrowed ranged from \$1,179 to \$2,298, again for pharmacy and osteopathy students, respectively. Therefore, it appears that pharmacy students borrowed least often and borrowed the lowest amounts. Fairly high amounts, averaging between \$1,817 and \$1,950 were borrowed by students of medicine [\$1,918], dentistry [\$1,950], and podiatry [\$1,817].

BEST COPY AVAILABLE

Table 12
DISTRIBUTION OF HEALTH PROFESSIONS STUDENTS WITH AND WITHOUT LOANS BY FAMILY INCOME:
School year 1970-71

| Percent of students with loans and without loans in health professions schools | Total ¹ | Family income | | | | | | | |
|--|--------------------|----------------------|--------------------|----------------------|----------------------|----------------------|---------------------|------------------|---|
| | | Less than \$5,000 | \$5,000 \$9,999 | \$10,000 \$14,999 | \$15,000 \$19,999 | \$20,000 \$24,999 | \$25,000 or more | None reported | |
| Medicine, all students | 100% | 7 | 20 | 24 | 14 | 11 | 21 | 1 | 1 |
| With loans | 100% | 10 | 27 | 29 | 16 | 8 | 9 | 2 | 2 |
| Without loans | 100% | 3 | 11 | 19 | 14 | 15 | 36 | 3 | 3 |
| Osteopathy, all students | 100% | 12 | 24 | 26 | 13 | 7 | 13 | 1 | 1 |
| With loans | 100% | 15 | 30 | 29 | 11 | 4 | 6 | 5 | 5 |
| Without loans | 100% | 4 | 10 | 20 | 17 | 12 | 30 | 5 | 5 |
| Dentistry, all students | 100% | 7 | 21 | 29 | 15 | 11 | 14 | 4 | 4 |
| With loans | 100% | 9 | 27 | 32 | 15 | 8 | 7 | 3 | 3 |
| Without loans | 100% | 3 | 12 | 22 | 16 | 16 | 27 | 5 | 5 |
| Optometry, all students | 100% | 9 | 25 | 28 | 13 | 9 | 12 | 4 | 4 |
| With loans | 100% | 14 | 33 | 29 | 11 | 5 | 4 | 3 | 3 |
| Without loans | 100% | 4 | 16 | 26 | 15 | 14 | 20 | 6 | 6 |
| Pharmacy, all students | 100% | 16 | 30 | 27 | 12 | 5 | 4 | 5 | 5 |
| With loans | 100% | 20 | 33 | 30 | 10 | 2 | 1 | 3 | 3 |
| Without loans | 100% | 13 | 28 | 25 | 14 | 7 | 7 | 7 | 7 |
| Podiatry, all students | 100% | 11 | 23 | 26 | 14 | 10 | 10 | 6 | 6 |
| With loans | 100% | 14 | 31 | 27 | 12 | 5 | 5 | 6 | 6 |
| Without loans | 100% | 5 | 12 | 24 | 17 | 16 | 18 | 7 | 7 |
| Veterinary Medicine, all students | 100% | 11 | 27 | 28 | 13 | 7 | 9 | 4 | 4 |
| With loans | 100% | 16 | 33 | 29 | 11 | 5 | 5 | 2 | 2 |
| Without loans | 100% | 6 | 20 | 28 | 15 | 10 | 14 | 6 | 6 |

¹ Percentages at each income level may not add to total because of rounding.

BEST COPY AVAILABLE

Table 14
PROPORTION OF HEALTH PROFESSIONS STUDENTS REPORTING INCOME AND AVERAGE AMOUNT OF INCOME FROM EACH SOURCE
School year 1970-71

| Source of income | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
|--|----------|------------|-----------|-----------|----------|----------|------------------------|
| Total number of students | 40,414 | 2,151 | 16,148 | 2,532 | 20,396 | 1,719 | 5,007 |
| Percent repaying income: | | | | | | | |
| Nonrefundable funds: Total | 98.6 | 98.4 | 97 | 99 | 98 | 9 | 98 |
| Own earnings and savings | 6.7 | 6.9 | 72 | 77 | 73 | 3 | 5.7 |
| Spouse's contribution | 48 | 43 | 44 | 36 | 21 | 46 | 4.4 |
| Parent's contribution | 54 | 52 | 51 | 57 | 48 | 50 | 50 |
| Federal health professions scholarship | 18 | 45 | 25 | 28 | 26 | 29 | 24 |
| National Institutes of Health supported research | 6 | 2 | 2 | * | * | 1 | 1 |
| Other federal research and/or training grants | 4 | 1 | 1 | 1 | 1 | * | 1 |
| State government scholarship | 8 | 7 | 11 | 6 | 9 | 11 | 7 |
| Other nonrefundable funds | 23 | 15 | 16 | 17 | 24 | 18 | 21 |
| Percent refunding loans: | | | | | | | |
| Refundable funds: Total | 54.9 | 70.7 | 64.7 | 54.6 | 43 | 60.7 | 52 |
| Federal health professions | 25 | 44 | 34 | 32 | 20 | 29 | 26 |
| Federal Office of Education | 10 | 17 | 15 | 12 | 6 | 12 | 10 |
| National defense student loan | 3 | 5 | 4 | 3 | 7 | 8 | 3 |
| Professional school | 10 | 9 | 5 | 2 | 1 | 1 | 3 |
| State government | 10 | 24 | 13 | 9 | 5 | 17 | 8 |
| Private bank | 9 | 12 | 10 | 8 | 9 | 8 | 9 |
| Other loans | 12 | 22 | 16 | 9 | 8 | 16 | 15 |

* Less than 0.5 percent.

BEST COPY AVAILABLE

Table 13 (Continued)
PROPORTION OF HEALTH PROFESSIONS STUDENTS REPORTING INCOME AND AVERAGE AMOUNT OF INCOME FROM EACH SOURCE
School year 1970-71

| Source of income | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
|--|----------|------------|-----------|-----------|----------|----------|------------------------|
| Total number of students | 40,414 | 2,151 | 16,645 | 2,832 | 26,706 | 1,146 | 1,001 |
| Average amount of income: | | | | | | | |
| Nonrefundable funds: Total | \$4,714 | \$4,773 | \$5,115 | \$4,292 | \$3,008 | \$5,019 | \$5,942 |
| Own earnings and savings | 1,578 | 1,675 | 1,769 | 1,541 | 1,671 | 2,030 | 1,439 |
| Spouse's contribution | 4,507 | 4,325 | 4,905 | 4,308 | 3,286 | 4,716 | 5,999 |
| Parent's contribution | 2,143 | 2,159 | 2,122 | 1,789 | 1,245 | 1,987 | 1,401 |
| Federal health professions scholarship | 964 | 469 | 727 | 628 | 697 | 682 | 663 |
| National Institutes of Health supported research | 844 | 611 | 688 | 929 | 600 | 512 | 591 |
| Other Federal research and/or training grants | 846 | 618 | 811 | 910 | 582 | 525 | 818 |
| State government scholarship | 581 | 946 | 607 | 709 | 552 | 432 | 704 |
| Other nonrefundable funds | 1,752 | 1,600 | 1,372 | 1,344 | 1,016 | 1,404 | 1,304 |
| Refundable funds (loans): Total | \$1,918 | \$2,298 | \$1,950 | \$1,568 | \$1,179 | \$1,817 | \$1,592 |
| Federal health professions | 1,084 | 661 | 865 | 800 | 702 | 859 | 885 |
| Federal Office of Education guaranteed loans | 1,414 | 1,564 | 1,550 | 1,324 | 1,130 | 1,436 | 1,298 |
| National defense student loan | 1,155 | 1,208 | 1,146 | 1,020 | 821 | 1,227 | 1,123 |
| Professional school | 1,269 | 628 | 729 | 517 | 684 | 846 | 670 |
| State government | 1,404 | 1,522 | 1,570 | 1,416 | 1,241 | 1,696 | 1,298 |
| Private bank | 1,407 | 1,488 | 1,503 | 1,355 | 1,033 | 1,487 | 1,278 |
| Other loans | 1,624 | 1,714 | 1,691 | 1,490 | 1,065 | 1,399 | 1,469 |

BEST COPY AVAILABLE

The proportion of students obtaining some income from their own earnings and savings varied widely among the disciplines. It ranged from about two-thirds of the medical and osteopathic students to four-fifths of those in veterinary medicine. The average amount of income from this source ranged between \$1,439 and \$1,769 for all professions except podiatry where the average was \$2,030. In spite of the high proportion of students with income from their own earnings and savings, less than one-half of the students in most professions worked during the 1970-71 school term. Again, the one exception was pharmacy students of whom 54 percent reported working. Among the other professions, the percent working ranged from 28 percent of the medical students to 47 percent of the podiatry students. [Figure 5.] The median number of hours worked per week ranged from 14 for veterinary and medical students to 20 for pharmacy students. Very few students worked 30 or more hours a week. Generally, single students worked least often. The proportion of those working increased as the students married and as they acquired the responsibilities of children.

Table 13 also shows that spouses tended to contribute more than twice as much income as any other source, ranging among the disciplines from \$3,286 for pharmacy students to \$4,905 for dentistry students. Between 36 and 44 percent of all of the

students had income from a spouse's contribution except for pharmacy students, of whom only 21 percent received help from a spouse. Approximately one-half of the students had contributions from parents, and such contributions averaged about \$2,000, again with the exception of pharmacy students, who received an average of \$1,245 from this source, and veterinary students, who received an average of \$1,301.

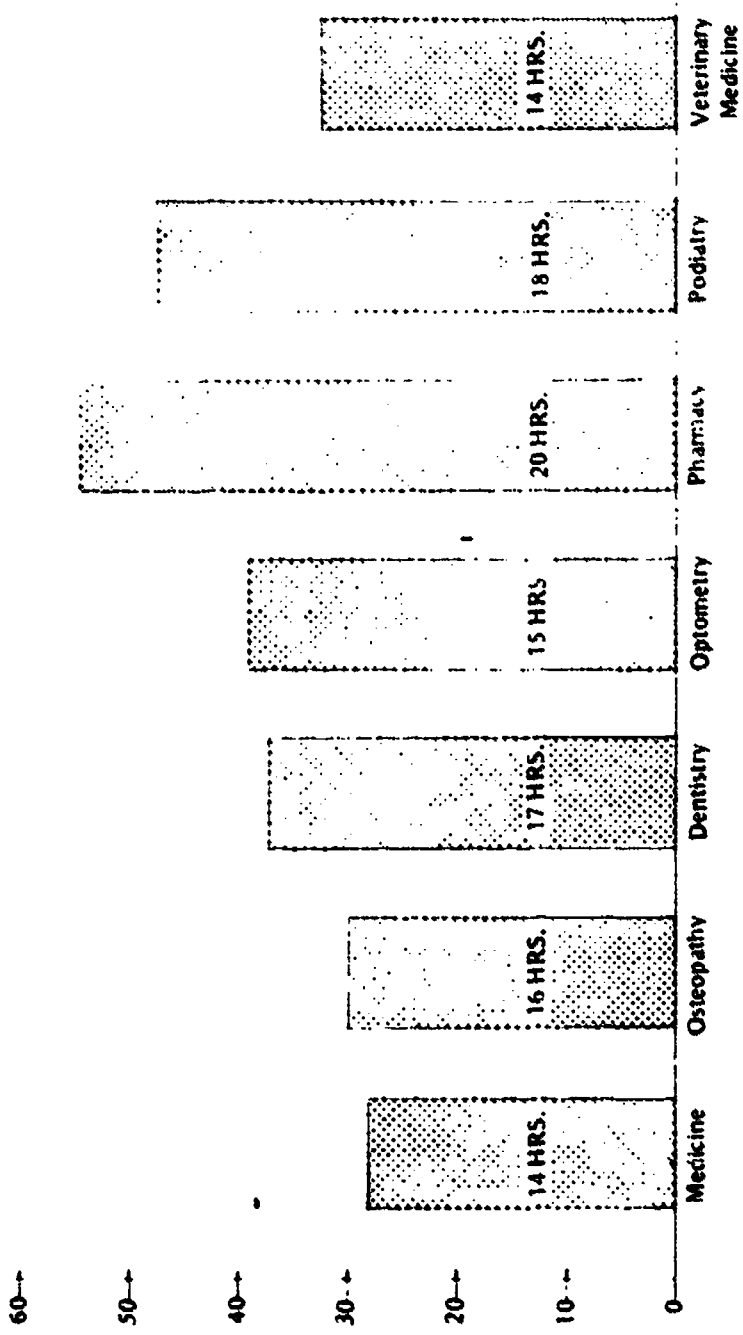
The one other source of nonrefundable funds from which a significant proportion of students received income was the Federal health professions scholarship program. Approximately one-fourth of the students in most professions were given this aid, although only 18 percent of the medical students and as much as 35 percent of the osteopathy students reported this source. Medical students received the highest average scholarship, \$914, and osteopathy students, the lowest, \$469. For students in the other disciplines, the average amounts of the scholarships ranged between \$628 and \$763. These proportions and amounts correspond closely to proportions and amounts determined from school reports.

By far, the largest proportion of students obtaining loans approximately one-half reported getting one from the Federal health professions loan program. Of all of the students, those reporting such

BEST COPY AVAILABLE

BEST COPY AVAILABLE

Figure 5
PROPORTION OF HEALTH PROFESSIONS STUDENTS WHO WORKED AND MEDIAN NUMBER OF HOURS WORKED
PER WEEK:
School year 1970-71



loans ranged from 20 percent for pharmacy students, to 44 percent for osteopathy students. The average loan generally fell in the range of \$661 [for osteopathy students] to \$885 [for veterinary students], except for medical students who received the highest amount \$1,084. The largest loans from a specifically named source generally came from the Federal Office of Education guaranteed loan program, State governments, or private banks, although fairly large loans were often obtained from other unnamed sources by 8 to 22 percent of the students in different professions.

Fifty-four percent of all students in the health professions reported receiving loans resulting in approximately \$84.5 million borrowed [Table 14]. One-half of that amount, \$41.8 million, was borrowed by the medical students who represented 45 percent of all health professions students. The medical students received 51 percent of the Federal health professions loan funds. The professions of medicine, dentistry, and pharmacy, with the largest numbers of students, received the largest aggregate amounts of loan money from almost all sources. The Federal health professions loan program lent \$21.7 million, representing 26 percent of all loan money reported. It ranged from 18 percent of the money borrowed by osteopathic students to 31 percent for optometry students. The students reported that 19 percent of all loan money came from a number of unspecified sources, while the Federal Office of Education and State governments both provided about 15 percent each. The Federal health professions loan program was reported to have provided the largest proportion of all loan money to the students in each profession except osteopathy and podiatry. The latter students borrowed proportionately more money from State governments 23 percent of osteopathy students and 27 percent of podiatry students.

BEST COPY AVAILABLE

Table 14
PROPORTION OF HEALTH PROFESSIONS STUDENTS REPORTING LOANS, DISTRIBUTION OF LOAN MONEY, AND AGGREGATE AMOUNT
OF LOANS FROM EACH SOURCE.
School year '970-71

| Sources of loans | Total all professions | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
|-------------------------------------|--------------------------|----------|------------|-----------|-----------|----------|----------|------------------------|
| Total number of students | 88,895 | 40,414 | 2,151 | 16,645 | 2,832 | 20,706 | 1,146 | 5,001 |
| Percent reporting loans: | | | | | | | | |
| All sources ² | 54% | 54% | 70% | 64% | 54% | 43% | 60% | 52% |
| Federal health professions | 26 | 25 | 44 | 34 | 32 | 20 | 29 | 26 |
| Federal Office of Education | 10 | 10 | 17 | 15 | 12 | 6 | 12 | 10 |
| National defense student loan | 4 | 3 | 5 | 4 | 3 | 7 | 8 | 3 |
| Professional school | 6 | 10 | 9 | 5 | 2 | 1 | 2 | 3 |
| State government | 10 | 10 | 24 | 13 | 9 | 5 | 17 | 8 |
| Private bank | 9 | 9 | 12 | 10 | 8 | 9 | 8 | 9 |
| Other loans | 12 | 12 | 22 | 16 | 9 | 8 | 10 | 15 |
| Percent distribution of loan money: | | | | | | | | |
| All sources ³ | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Federal health professions | 26 | 26 | 18 | 24 | 31 | 27 | 23 | 27 |
| Federal Office of Education | 15 | 13 | 17 | 19 | 19 | 14 | 16 | 16 |
| National defense student loan | 5 | 3 | 4 | 4 | 4 | 12 | 9 | 4 |
| Professional school | 7 | 12 | 4 | 3 | 1 | 2 | 2 | 3 |
| State government | 15 | 14 | 23 | 16 | 15 | 12 | 27 | 12 |
| Private bank | 13 | 12 | 11 | 12 | 13 | 17 | 11 | 13 |
| Other loans | 19 | 19 | 23 | 21 | 16 | 16 | 12 | 24 |

BEST COPY AVAILABLE

Table 14 (Continued)
PROPORTION OF HEALTH PROFESSIONS STUDENTS REPORTING LOANS, DISTRIBUTION OF LOAN MONEY, AND AGGREGATE AMOUNT
OF LOANS FROM EACH SOURCE:
School year 1970-71

| Sources of loans | Total all professions | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
|--|--------------------------|----------|------------|-----------|-----------|----------|----------|------------------------|
| Total number of students | 88,895 | 40,414 | 2,151 | 16,645 | 2,832 | 20,706 | 1,146 | 5,001 |
| Aggregate amount of loans (in thousands): | | | | | | | | |
| All sources ³ | \$84,507 | \$41,846 | \$3,452 | \$20,844 | \$2,393 | \$10,539 | \$1,256 | \$4,177 |
| Federal health professions | 21,652 | 11,053 | 630 | 4,957 | 734 | 2,864 | 283 | 1,131 |
| Federal Office of Education | 12,948 | 5,553 | 588 | 3,982 | 466 | 1,481 | 199 | 679 |
| National defense student loan | 4,051 | 1,462 | 122 | 841 | 100 | 1,230 | 117 | 179 |
| Professional school | 6,138 | 5,083 | 126 | 598 | 25 | - | 23 | 133 |
| State government | 12,634 | 5,958 | 799 | 3,432 | 368 | 1,235 | 336 | 506 |
| Private bank | 10,708 | 4,901 | 377 | 2,577 | 322 | 1,833 | 143 | 555 |
| Other loans | 16,374 | 7,836 | 809 | 4,457 | 377 | 1,725 | 155 | 1,015 |

¹ The figures in this table are based on student responses and may not agree with similar data from school and/or others.
² Percent of students by source adds to more than total because some students reported more than one source of loan.
³ Individual source percentages and amounts may not add to totals because of rounding.

BEST COPY AVAILABLE

4. RELATIONSHIP BETWEEN INCOME AND EXPENSES

Between 9 and 18 percent of the students reported a balance between income and expenses, with the proportion requiring loans fairly evenly matched with the proportion of those who did not [Figure 6]. About one-half of the osteopathy, optometry, and podiatry students had deficits in spite of loans; in other disciplines the proportions of

students with deficits ranged from 37 percent of the medical students to 44 percent of dental and pharmacy students [Table 15]. There was a consistently larger proportion of childless married students with incomes exceeding their expenses, reflecting the large contributions from spouses. As the number of children increased, the proportion of students with income exceeding expenses dropped and the percent requiring loans to balance their budget generally increased. Fifty-one to 64 percent of the single

BEST COPY AVAILABLE

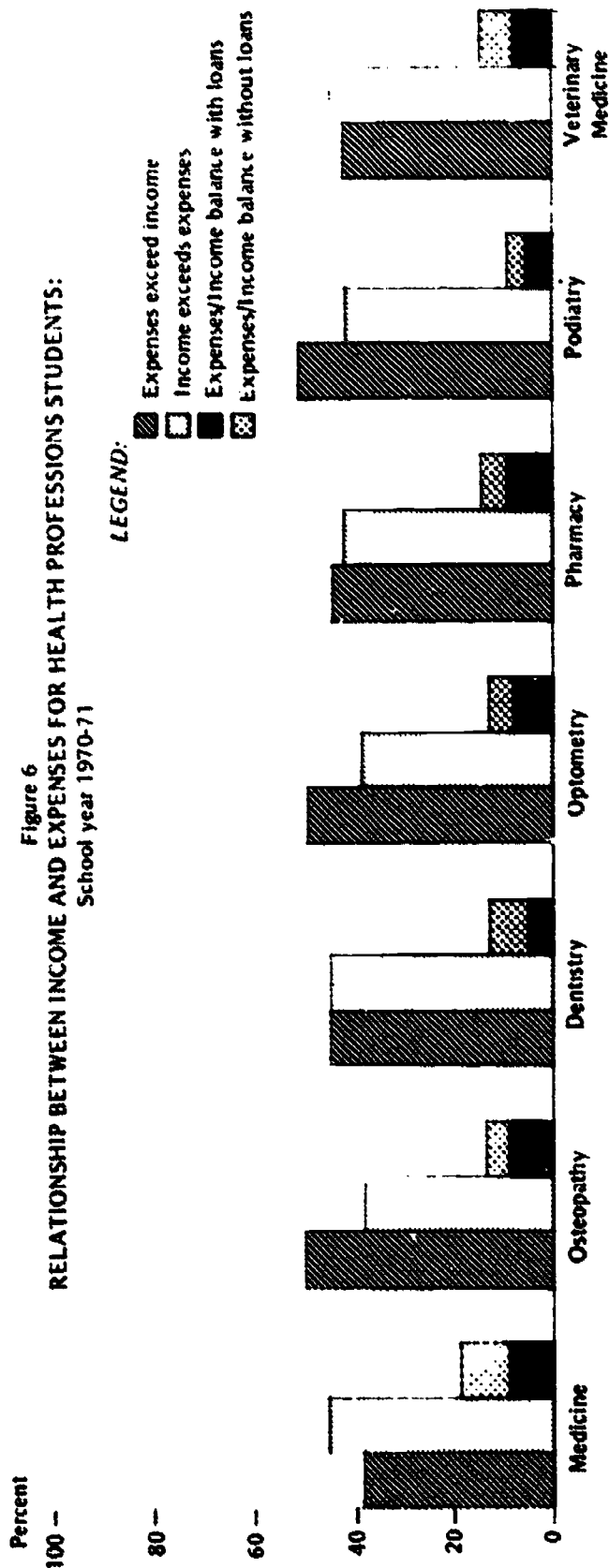


Table 15
RELATIONSHIP BETWEEN INCOME AND EXPENSES FOR HEALTH PROFESSIONS STUDENTS BY MARITAL STATUS.
School year 1970-71

| Relation between income and expenses | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
|---|----------|------------|-----------|-----------|----------|----------|------------------------|
| Total, all students | 100% | 100 | 100% | 100% | 100% | 100% | 100 |
| In balance | 18 | 13 | 12 | 14 | 14 | 9 | 15.1 |
| With loans | 8 | 8 | 7 | 6 | 5 | 4 | 7 |
| Without loans | 10 | 5 | 5 | 7 | 9 | 5 | 8 |
| Income exceeds expenses | 45 | 37 | 44 | 38 | 42 | 41 | 43 |
| Expenses exceed income | 37 | 50 | 44 | 49 | 44 | 50 | 47 |
| Total, single students | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| In balance | 25 | 21 | 19.1 | 19 | 18 | 13 | 21 |
| With loans | 10 | 11 | 10 | 8 | 7 | 6 | 8 |
| Without loans | 15 | 10 | 10 | 11 | 11 | 7 | 14 |
| Income exceeds expenses | 33 | 26 | 31 | 27 | 38 | 29 | 33 |
| Expenses exceed income | 41 | 53 | 50 | 54 | 44 | 57 | 46 |
| Total, married - no children | 100 | 100 | 100 | 100.1 | 100 | 100.1 | 100 |
| In balance | 8 | 8 | 6 | 6 | 8 | 4 | 8 |
| With loans | 4 | 6 | 3 | 3 | 3 | 2 | 4 |
| Without loans | 4 | 2 | 3 | 3 | 5 | 2 | 4 |
| Income exceeds expenses | 61 | 48 | 58 | 54 | 57 | 52 | 62 |
| Expenses exceed income | 31 | 44 | 36 | 39 | 35 | 43 | 30 |
| Total, married - one child | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| In balance | 12 | 5 | 5 | 6 | 3.1 | 7 | 7 |
| With loans | 7 | 4 | 5 | 5 | 3 | 3 | 5 |
| Without loans | 5 | 1 | 1 | 1 | 1 | 3 | 2 |
| Income exceeds expenses | 52 | 40 | 49 | 44 | 37 | 45 | 48 |
| Expenses exceed income | 36 | 55 | 46 | 50 | 60 | 48 | 45 |

See footnotes at end of table.

BEST COPY AVAILABLE

RELATIONSHIP BETWEEN INCOME AND EXPENSES FOR HEALTH PROFESSIONS STUDENTS BY MARITAL STATUS:
School year 1970-71

| Relation between income and expenses | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
|---|----------|------------|-----------|-----------|----------|----------|------------------------|
| Total, married - two or more children | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| In balance | 16 | 8 | 9 | 9 | 11 | 11 | 7 |
| With loans | 10 | 5 | 6 | 8 | 2 | 7 | 5 |
| Without loans | 6 | 3 | 3 | 1 | 9 | 4 | 2 |
| Income exceeds expenses | 46 | 37 | 43 | 42 | 34 | 44 | 40 |
| Expenses exceed income | 37 | 55 | 48 | 49 | 55 | 44 | 53 |

¹ Some totals may not add because of rounding.

students either had expenses exceeding their income or required loans to balance their income. These proportions tended to be higher than for any of the married students.

5. INDEBTEDNESS

For students in health professions schools other than pharmacy, the average amount of indebtedness as of June 1971 ranged from \$3,534 for students of veterinary medicine to \$5,966 for students of osteopathic medicine. Seventy-nine percent of all osteopathic students reported some debt, and the propor-

tions ranged from 72 percent for freshmen to 84 percent for seniors [Table 16]. The proportion of students with debts and the average amount of indebtedness increased for each year in school in all of the disciplines.

Variation by marital status, in the proportion of students with debts and the average indebtedness, followed the expected pattern of proportions of students with debts and of average amounts owed increasing with family size. Pharmacy students, who were younger and less likely to be married, were the single exception. While the proportion of single students with debts ranged from 60 percent in

BEST COPY AVAILABLE

Table 16
PROPORTION OF STUDENTS WITH DEBTS IN HEALTH PROFESSIONS SCHOOLS AND AVERAGE AMOUNT OF INDEBTEDNESS
By school class: June 1971

| School class | Medicine | Osteopathy | Dentistry | Optometry | Pharmacy | Podiatry | Veterinary Medicine |
|-----------------------------------|----------|------------|-----------|-----------|----------|----------|------------------------|
| All classes: | | | | | | | |
| Percent reporting debts | 65% | 79% | 74% | 65% | 56% | 70% | 66% |
| Average debt | \$4,289 | \$5,966 | \$4,888 | \$3,559 | \$2,477 | \$4,115 | \$3,534 |
| Freshman: | | | | | | | |
| Percent reporting debts | 61% | 72% | 66% | 57% | 52% | 60% | 58% |
| Average debt | \$2,975 | \$3,457 | \$3,162 | \$2,560 | \$1,974 | \$3,119 | \$2,670 |
| Sophomore: | | | | | | | |
| Percent reporting debts | 62% | 75% | 73% | 67% | 58% | 70% | 70% |
| Average debt | \$3,545 | \$4,930 | \$4,149 | \$3,032 | \$2,315 | \$3,691 | \$3,180 |
| Junior: | | | | | | | |
| Percent reporting debts | 68% | 84% | 78% | 68% | 57% | 76% | 68% |
| Average debt | \$5,194 | \$6,069 | \$5,322 | \$3,898 | \$2,650 | \$4,368 | \$3,851 |
| Senior: | | | | | | | |
| Percent reporting debts | 72% | 84% | 81% | 73% | 58% | 80% | 72% |
| Average debt | \$5,504 | \$9,796 | \$6,900 | \$5,047 | \$3,261 | \$5,318 | \$4,552 |

schools of veterinary medicine to 71 percent in pathic colleges. The lowest average debt reported was \$3,376 for single optometry students, and the highest more than one child the range was from 83 percent in was \$8,548 for married osteopathic students with veterinary medicine schools to 93 percent in osteo- two or more children.

¹ West, M.D., and Altenderfer, M.A., *How Medical Students Finance Their Education*. U.S. Department of Health, Education, and Welfare, Public Health Service Publication No. 133b. Washington, D.C.: U.S. Government Printing Office, 1965.

² Smith, L.C.R., and Crocker, A.R., *How Medical Students Finance Their Education*. U.S. Department of Health, Education, and Welfare, Public Health Service Publication No. 133b-1. Washington, D.C.: U.S. Government Printing Office, 1970.

³ Beginning with the Health Professions Educational Assistance Act of 1963 (P.L. 85-129), and continuing with the Health Professions Educational Assistance Amendments of 1965 (P.L. 89-270), and the Health Manpower Act of 1968 (P.L. 90-490), a series of Federal loan and scholarship programs were established that covered all seven of the health professions in this survey.

BEST COPY AVAILABLE

BEST COPY AVAILABLE

APPENDICES ☐

43/44



DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

Public Health Service
Washington, D.C. 20492
Telephone: 204-2081

Office of the Assistant Secretary
for Health Policy and Statistics

Dear Sir:

The Bureau of Health Statistics is pleased to inform you that the following information is being made available to you for your information and use:

The Bureau of Health Statistics is pleased to inform you that the following information is being made available to you for your information and use:

The Bureau of Health Statistics is pleased to inform you that the following information is being made available to you for your information and use:

The Bureau of Health Statistics is pleased to inform you that the following information is being made available to you for your information and use:

The Bureau of Health Statistics is pleased to inform you that the following information is being made available to you for your information and use:

The Bureau of Health Statistics is pleased to inform you that the following information is being made available to you for your information and use:

The Bureau of Health Statistics is pleased to inform you that the following information is being made available to you for your information and use:

Sincerely,

Richard L. Evans

Assistant Secretary
for Health Policy and Statistics

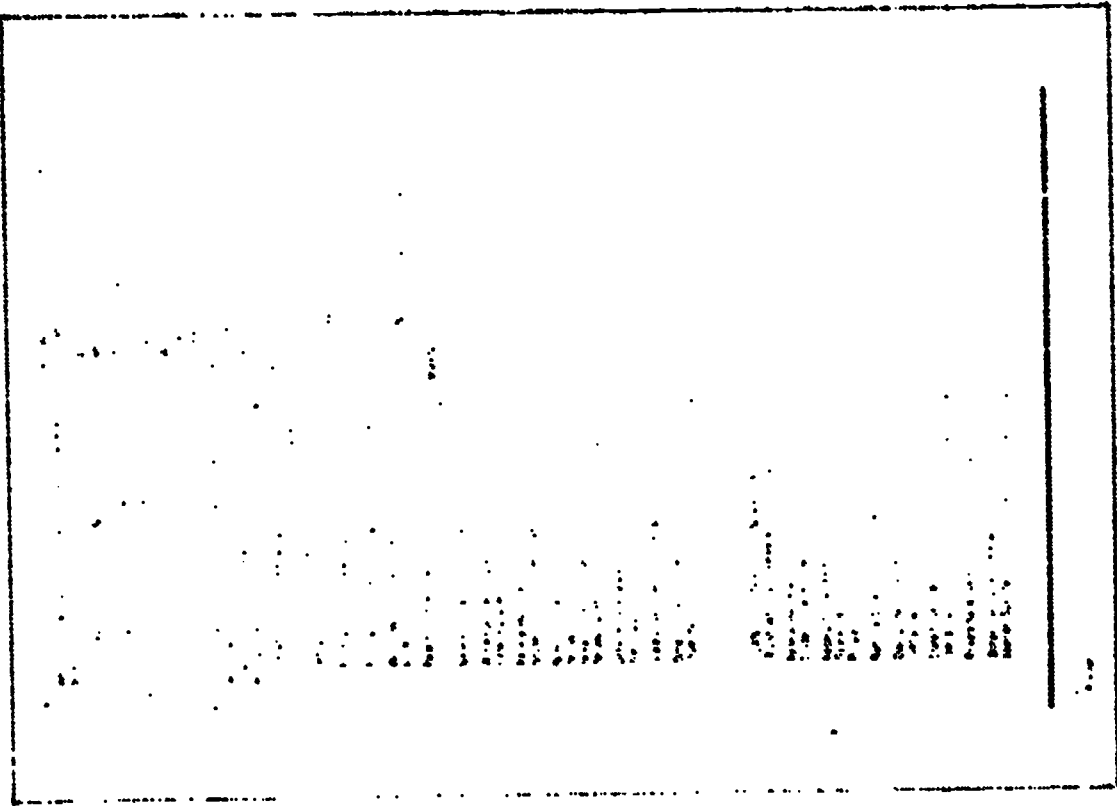
Enclosure

BEST COPY AVAILABLE

[illegible]

BEST COPY AVAILABLE

5



BEST COPY AVAILABLE

BEST COPY AVAILABLE

| | | |
|--|--|--|
| | | |
|--|--|--|

BEST COPY AVAILABLE



ASSOCIATION OF AMERICAN MEDICAL COLLEGES
1900 200 and 20000 2000 2000 2000 2000

1900 2000 2000 2000 2000 2000

1900 2000 2000 2000 2000 2000

1900 2000 2000 2000 2000 2000

1900 2000 2000 2000 2000 2000

1900 2000 2000 2000 2000 2000

1900 2000 2000 2000 2000 2000

1900 2000 2000 2000 2000 2000

1900 2000 2000 2000 2000 2000

BEST COPY AVAILABLE



American Osteopathic Association

January, 1973

10-11-73

Dear Sir: I am writing to you regarding the matter of Health Insurance. I am sure you are familiar with the fact that the American Osteopathic Association has been successful in securing health insurance for its members. This success will have important implications for the future of the Association and its members. We must now concentrate on this important study.

Sincerely yours,

Donald P. Russell, M.D.
President, American Osteopathic Association

Lit. & Press.

BEST COPY AVAILABLE

10/11

AMERICAN DENTAL ASSOCIATION

Dear Dental Student:

On behalf of the American Dental Association, I would like to congratulate you on your completion of the study of Health, Safety, and Environment. As Dr. Enright, Interim President, has indicated, this study will be an important step in the development of the dental profession's role in the health care system.

We urge you to return to completing the study of Health and Safety, as it is a most important project.

Sincerely,

William J. Enright

Thomas J. Enright, D.D.
Associate President
Administration and Finance

THOMAS J. ENRIGHT
D.D.

**AMERICAN
Association of
Colleges of
Pharmacy**

CHARLES W. BLISS, President
American Association of Colleges of Pharmacy
1200 North Dearborn Street, Chicago, Illinois 60610
JAMES E. HARRIS, Executive Secretary
1200 North Dearborn Street, Chicago, Illinois 60610
JAMES E. HARRIS, Executive Secretary
1200 North Dearborn Street, Chicago, Illinois 60610

Dear Student:

On behalf of the American Association of Colleges of Pharmacy, I would like to express your cooperation in the survey of Health Professional Student Financing. As Dr. Indira's letter indicates, the information gained from this survey will serve the first applications for policy in financial assistance to students in all of the health professions. As he states, all information which permits identification of student will be strictly confidential.

We urge your cooperation in this important study.

Sincerely yours,

Charles W. Bliss
Charles W. Bliss
Executive Secretary

(RM:1)

BEST COPY AVAILABLE

BEST COPY AVAILABLE

AMERICAN OPTOMETRIC ASSOCIATION



Dear Student:

On behalf of the American Optometric Association, I urge your cooperation in the Survey of Health Profession Student Financing. As indicated in the letter indicating the information desired for this survey will have important implications for policy in financial assistance to health care of the health professions.

Sincerely yours,

Harold B. Long
Harold B. Long
Executive Director

JMS:lj

AMERICAN ASSOCIATION OF COLLEGES
OF PODIATRIC MEDICINE



Dear Student:

As I am sure you are already aware, the American Association of Colleges of Podiatric Medicine has extended its cooperation to the Bureau of Health Manpower Education, U.S. Public Health Service for the purpose of conducting a Survey of Health Profession Student Financing.

I would like to encourage your cooperation in this very important undertaking. The information gained from this survey will greatly assist the podiatric profession in relating the financial needs for students of podiatric medicine to Federal, state, and local agencies.

I strongly urge your cooperation in this important study.

Sincerely yours,

Robert W. Oliver

Robert W. Oliver
Executive Director

TEST COPY AVAILABLE

BEST COPY AVAILABLE



American Veterinary Medical Association

Dear Sirs:

On behalf of the American Veterinary Medical Association, I am writing to you to urge you to support the efforts of the Health Profession Working Group, the American Veterinary Medical Association, the National Veterinary Medical Association, and the American Veterinary Medical Association in their efforts to improve the health of the nation. We hope that you will support this important study.

Sincerely,

M. A. Larson
M. A. Larson, DVM
Executive Vice President